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May 18, 2012 Reference No. 038443-62

Ms. Karen Cibulskis
Remedial Project Manager
United States Environmental Protection Agency
Region V
77 West Jackson Boulevard
Mail Code SR-6J
Chicago, IL 60604

Dear Ms. Cibulskis:

Re: Explosive Gas Mitigation Work Plan (Work Plan) for
Building 1, Parcel 5173, 2031 Dryden Road (SIM Trainer)
Vapor Intrusion Investigation
South Dayton Dump and Landfill Site (Site), Moraine, Ohio

This Work Plan details mitigation measures that will be completed to address volatile organic compound (VOC) and explosive gas concentrations detected in indoor air at the above building. Conestoga-Rovers & Associates (CRA) has prepared this Work Plan in accordance with the United States Environmental Protection Agency (USEPA) Vapor Intrusion Investigation Work Plan (USEPA, November 2011) and the USEPA Region 5 Vapor Intrusion Guidebook (USEPA, 2010) (USEPA Region 5 Guidance). CRA has also prepared this work plan to comply with the substantive requirements of Ohio Administrative Code (OAC) 3745-27-12 with respect to permanent monitoring for explosive gases in buildings located within the limits of waste. CRA has prepared this Work Plan on behalf of the Respondents to the Administrative Settlement Agreement and Order on Consent (ASAOC) with USEPA for Remedial Investigation/Feasibility Study (RI/FS) of the Site, Docket No. V-W-06-C-852 (Respondents).

As the SIM Trainer building requiring mitigation is situated on property that is owned and occupied by third parties, coordination of mitigation work with the owner and tenants is important, and any mitigation systems that are eventually installed will require their consent and the design of the mitigation system(s) will need to be consistent with on-going operations.

1.0 BACKGROUND

Pursuant to the ASAOC with USEPA, the Respondents installed sub-slab (SS) soil vapor probes at the Site in December 2011, performed one round of monitoring (initial round) in January 2012, and one follow-up round of monitoring (Round 1 follow-up) in March 2012.

On January 12, 2012, the Respondents measured explosive gas concentrations in the range of 1.1 to 1.2 percent (reported as methane by volume) in samples collected from the sub-slab soil vapor probe (Probe C) installed in the storage portion of SIM Trainer. The measured explosive gas concentration range of 1.1 to 1.2 percent, as methane, is greater than 10 percent of the lower explosive limit (LEL) for methane (i.e., 0.5 percent methane by volume). Under USEPA Region 5 Guidance, if the sub-slab (SS) sample results exceed 10 percent of the LEL or the indoor air (IA) data exceed 1 percent of the LEL, emergency actions may be needed to eliminate the potential explosive hazard. With regards to actions to be taken, USEPA Region 5 Guidance further states:

> *Any residences[1] with IA concentrations greater than those discussed above require rapid mitigation within a few weeks of the receipt of sampling results. … (e)arly actions may also be undertaken based on elevated SS sample results.*

Chapter 3745-27-12(E)(5) of the Ohio Administrative Code (OAC) does not require action when the sub-slab explosive gas concentration exceeds 10 percent of the LEL. Rather, OAC 3745-27-12(E)(5) requires contingency procedures in the event that the concentration of explosive gas within the facility boundary exceeds 100 percent of the LEL or within structures exceeds 25 percent of the LEL. Therefore, the mitigation measures proposed herein are intended to address the limits specified in the USEPA Region 5 Guidance. Based on field measurements collected to date, CRA notes that LEL reporting limits may be met or exceeded due to combustible gas monitor sensitivity problems. Also, the laboratory reporting detection limit (RDL) for methane is approximately 0.2 percent, which is greater than the 0.05 percent (1 percent of the LEL) target concentration. As a result, the Respondents will use a time-weighted average to determine exceedances of the 1 percent of the LEL IA target concentration.

The Respondents also measured the combustible gas concentration in samples collected from the sub-slab soil vapor probes installed in a closet in the office (Probe A) and the shooting range (Probe B) portions of SIM Trainer, and in the indoor air of this building, and did not detect any combustible gases (i.e., the readings were 0.0 percent methane by volume), with the exception

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[1] In accordance with Section 8.6.8 of the USEPA Region 5 Guidance, the Respondents prepared this Work Plan to reduce VI risks to acceptable levels for a non-residential setting, i.e., workplace, where the general public is expected to be present, and chemicals forming hazardous vapors are not used in routine operations.

of the post-sample combustible gas measurement from Probe B which was 0.1 percent methane by volume (i.e., 2 percent of the LEL). The sub-slab soil vapor probe locations in SIM Trainer are presented on Figure 1.

The Respondents collected confirmatory explosive gas measurements from samples of sub-slab soil vapor Probe C and indoor air in SIM Trainer. The Respondents measured combustible gas values using the Landtec GEM-2000 meter for each event, and collected additional combustible gas measurements using the RKI GX-2003 meter for the March 2012 VI sampling event and beginning weekly on April 17, 2012. The explosive gas measurements are presented in Table 1.

1.1 SUB-SLAB SOIL VAPOR AND INDOOR AIR SAMPLE RESULTS

In January 2012, the Respondents collected sub-slab soil vapor samples to determine if compounds are present in soil vapor beneath on-Site and nearby building foundations, and floor slabs at concentrations sufficient to create the potential for contaminants to migrate into the indoor air of Site buildings at levels posing an unacceptable risk to building occupants. A summary of January 2012 SIM Trainer sub-slab soil vapor analytical results, compared to the applicable screening levels, is presented in Table 2. The following table presents a summary of January 2012 SIM Trainer sub-slab soil vapor VOC concentrations that were greater than Industrial Soil Vapor Screening Levels (SVSLs) for Further Investigation, corresponding to a target excess life-time cancer risk (ELCR) of 10^{-6} or Hazard Index (HI) of 0.1 in indoor air, assuming a default attenuation factor (DAF) equal to 0.1:

SIM Trainer Parcel 5173 Building 1 SS Probe Location	*Analyte*	*Concentration ($\mu g/m^3$)*	*Industrial SVSL for Further Investigation (DAF=0.1)*	
			ELCR of 10^{-6}	*HI = 0.1*
A	Trichloroethene	2,100	30	8.8
B	Chloroform	41	5.3	430
	cis-1,2-Dichloroethene	340	NV	260
	Trichloroethene	3,700	30	8.8
C	Benzene	750	16	130
	Chlorobenzene	2,400	NV	220
	cis-1,2-Dichloroethene	29,000	NV	260

SIM Trainer Parcel 5173 Building 1 SS Probe Location	*Analyte*	*Concentration ($\mu g/m^3$)*	*Industrial SVSL for Further Investigation (DAF=0.1)*	
			ELCR of 10^{-6}	*HI = 0.1*
	Ethylbenzene	1400	49	4400
	m&p-Xylenes	3,600	NV	440
	o-Xylene	3,100	NV	440
	trans-1,2-Dichloroethene	610	NV	260
	Trichloroethene	510	30	8.8
	Vinyl chloride	2,800	28	440
	Xylenes (total)	6,700	NV	440

Notes:

$\mu g/m^3$ – microgram per cubic meter
NV – No Value

As sub-slab soil vapor VOC concentrations were greater than industrial SVSLs for further investigation, the Respondents collected follow-up samples of indoor air with concurrent sub-slab soil vapor samples. Follow-up sampling was completed to determine if indoor air VOC concentrations are greater than indoor air screening levels (IASLs) for mitigation, due to the VI pathway. The follow-up sub-slab soil vapor results were compared to USEPA SVSLs for Monitoring (i.e., for use with IASLs to determine if on-going monitoring is necessary). A summary of March 2012 SIM Trainer sub-slab soil vapor analytical results, compared to the applicable screening levels, is presented in Table 3. The following table presents a summary of March 2012 SIM Trainer sub-slab soil vapor VOC concentrations that were greater than Industrial SVSLs for Monitoring, corresponding to a target ELCR of 10^{-5} or HI of 1 in indoor air, assuming a DAF equal to 0.1:

SIM Trainer Parcel 5173 Building 1 SS Probe Location	*Analyte*	*Concentration ($\mu g/m^3$)*	*Industrial SVSL for Monitoring (DAF=0.1)*	
			ELCR of 10^{-5}	*HI = 1*
A	Trichloroethene	2,100	300	88
B	Chloroform	57	53	4,300
	Trichloroethene	3,700	300	88
C	Benzene	1,000	160	1300
	Chlorobenzene	3,100	NV	2,200
	cis-1,2-Dichloroethene	41,000	NV	2,600

SIM Trainer Parcel 5173 Building 1 SS Probe Location	*Analyte*	*Concentration ($\mu g/m^3$)*	*Industrial SVSL for Monitoring (DAF=0.1)*	
			ELCR of 10^{-5}	*HI = 1*
	Ethylbenzene	2,300	490	44,000
	m&p-Xylenes	5,600	NV	4,400
	o-Xylene	5,000	NV	4,400
	Trichloroethene	650	300	88
	Vinyl chloride	4,400	280	4,400

Notes:

$\mu g/m^3$ – microgram per cubic meter
NV – No Value

A summary of March 2012 SIM Trainer indoor air analytical results, compared to the applicable screening levels, is presented in Table 4. The following table presents a summary of March 2012 SIM Trainer indoor air VOC concentrations that were greater than Industrial IASLs for Mitigation, corresponding to a target ELCR of 10^{-5} or HI of 1 in indoor air:

SIM Trainer Parcel 5173 Building 1 Indoor Air Sample Location	*Analyte*	*Concentration ($\mu g/m^3$)*	*Industrial IASL for Mitigation*	
			ELCR of 10^{-5}	*HI = 1*
IA_A	Trichloroethene	28	30	8.8
IA_C	Tetrachloroethene (PCE)	800	470	180

Note:

$\mu g/m^3$ – microgram per cubic meter

PCE was either not detected in sub-slab soil vapor samples, or was detected at concentrations less than applicable screening levels, and was unlikely to result in detectable indoor air concentrations via the vapor intrusion pathway[2]. The presence of PCE in indoor air at a

[2] USEPA. 2012. *EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings.* EPA/530-R-10-002. Office of Solid Waste and Emergency Response. Washington, D.C. March.

concentration greater than its applicable screening level was likely due to indoor (background) sources.

Summaries of SIM Trainer sub-slab soil vapor and indoor air vapor intrusion analytical results, compared to the applicable screening levels, are presented in Tables 2, 3, and 4. Figure 1 presents the sub-slab soil vapor and indoor air concentrations that were greater than applicable screening levels.

Trichloroethene (TCE) was detected at concentrations greater than applicable criteria in samples collected from groundwater monitoring well MW-202 (located approximately 100 feet (ft) south of the building), vertical aquifer sampling (VAS) location VAS-15 (located approximately 35 ft south of the building), and from soil gas probe GP14-09 (located approximately 14 ft west of the building). TCE in all samples collected from vertical aquifer sampling (VAS) location VAS-9, located approximately 240 ft west to the northwest of the building, were greater than its USEPA Maximum Contaminant Level (MCL); however, TCE was not detected in groundwater samples collected from MW-215A and MW-215B, which were installed in the same area as VAS-9. The locations of the referenced investigative locations are presented on Figure 1.

As the methane, sub-slab soil vapor, and indoor air results in samples collected from SIM Trainer were greater than applicable criteria, this mitigation work plan discusses the mitigation system design and installation process, and identifies the monitoring, reporting, and schedule associated with the work.

2.0 BUILDING CONDITIONS

In order to implement appropriate vapor intrusion engineering control measures, the building structure, including use, type of foundation, and type of heating/cooling/ventilation systems, must be understood.

The floor slab of a building can act as a barrier or avenue to VI. A slab that is in poor condition (i.e. cracked; unsealed; un-caulked floor, wall, or expansion joints) and is constructed of permeable material will permit more VI. An effectively sealed or well constructed slab in good condition will inhibit upward flow of sub-slab vapors. The presence of a barrier such as a vapor barrier beneath the slab, or in the form of a floor coating will also inhibit VI.

Another factor affecting vapor intrusion is a forced air heating system that draws cold air from within a building to be heated and returned to the indoor environment. This type of heating system can cause a negative pressure within the occupied space when operating, causing sub-slab soil vapors to more readily enter the heated space. This is especially true if cold air returns are blocked or not adequately sized for the blower fan.

The tendency to over-insulate and effectively weatherproof a building can contribute to less ventilation of the indoor area, and lead to the accumulation of contaminants in the indoor air space.

Conversely, an indoor space that is not heated, has exterior walls that are not well sealed, has roof-top air exchange vents, or a number of large doors which are in use (such as a warehouse or older industrial space) leads to the continual exchange of indoor air with air from outside the building, which is effective in preventing vapors from accumulating within a building.

The building is a single-story commercial-use building constructed in three stages. The northern and central portions were constructed prior to 1956. The western and southern additions were constructed prior to 1959 and 1968, respectively. The building footprint is 8,250 square feet (ft^2).

The building is constructed with concrete block walls, a brick façade at the front and has a concrete slab-on-grade foundation that is either bare or painted. Exterior openings include vents, fans, windows, two bay doors, and two personnel doors. The building is occupied during business hours (4-hour shifts) by one adult worker and customers.

The floor in the north side combat training room is epoxy-coated. The storage area in the north portion is heavily stained, and has an oily odor and numerous cracks. The Respondents installed sub-slab soil vapor Probe C in the storage area in the north portion of SIM Trainer (see Figure 1).

The shooting range occupies the center portion of the building, is heated by forced air natural gas ceiling units, and has large cracks present in the concrete floor, which is epoxy-coated (the cracks predate the epoxy coating and the floor appears to be relatively well sealed). An air handling unit draws air from the shooting range out through the roof, and is in operation during SIM trainer business hours. The Respondents installed sub-slab soil vapor Probe B in the shooting range in the center portion of SIM Trainer (see Figure 1).

The southern addition is heated by separate forced air natural gas unit, and cooled by a central air conditioner (A/C). The Respondents installed sub-slab soil vapor Probe A in the southern addition (see Figure 1).

The Respondents completed a survey of potential indoor VOC sources in SIM Trainer in March 2012. The potential sources of VOCs in SIM Trainer included: primer; gun cleaners and scrubbers, adhesive; polish; and cleaners. The VOC contents of these products include: acetone, butane, propane, petroleum distillates, lubricants, halogenated solvents, and unspecified VOCs.

2.1 DELINEATION OF ELEVATED METHANE LEVELS

The Respondents measured explosive gas concentrations at exterior soil gas probes in 2009. On the SIM Trainer property, methane concentrations were zero percent (i.e., zero percent LEL) at soil gas location GP14-09, which is located approximately 16 ft northwest from the southwestern corner of the building (see Figure 1). The March 2012 analytical results were all not detected for methane samples collected from sub-slab soil vapor probes and indoor air in Parcel 5172 Building 1 and Parcel 5174 Building 1, located approximately 30 ft north and 45 ft south, respectively, of the SIM Trainer Building.

Methane values from these soil gas probes and sub-slab soil vapor probes located on Parcel 5173 are presented in Table 5. Based on the methane values measured in the soil vapor and sub-slab soil vapor probes, elevated concentrations of explosive gases beneath the building floor slab are limited to the northern portion of SIM Trainer (i.e., Probe C).

TCE was detected at concentrations that were greater than the applicable IASL in samples collected from SS probe A. As a conservative measure, and in order to also address the sub-slab TCE concentrations, the mitigation measures proposed below will be completed for the entirety of the SIM Trainer building. Consequently, the Respondents are not proposing additional delineation. Additional delineation of the explosive gas concentrations beneath the Site will be included in the Landfill Gas Investigation to be completed following finalization of the OU1 RI/FS.

3.0 PLANNED MITIGATION MEASURES

The suitability of mitigation techniques depends partly on the permeability of the soil and the construction details of the building. The building construction details are discussed above and the physical characteristics of the soil are discussed below. Based on the GP14-09 investigative location in the vicinity of the building, the underlying stratigraphy consists of loose, well-graded, medium to coarse sand and gravel fill and, below 8.3 feet below ground surface (ft bgs), native material. At GP14-09, the Respondents encountered a 1.3-ft thick layer of white, moist, silt-like material at a depth of 7 ft bgs. At VAS-15, located approximately 36 ft south of SIM Trainer, the underlying stratigraphy consists of compact, moist, silt and clay fill. Native material consists of compact, well-graded, moist, fine- to medium grained sand and gravel, trace silt, and is present at a depth of 8 ft bgs. The Respondents encountered a 1.5 ft thick layer of dense, silty sand till at a depth of 38.5 ft bgs at the location of VAS-15. Generally, the soil and waste material beneath the Site does not present a barrier to subsurface gas migration. Small areas of finer-grained material may present local barriers to gas migration.

The mitigation measures to be implemented are detailed below.

3.1 EXPLOSIVE GAS MONITORING SYSTEM

The Respondents propose to install explosive gas alarms within the building.

The Respondents propose to install an explosive gas alarm system for SIM Trainer, dependent upon the consent of the owner. The explosive gas alarm system will consist of explosive gas sensors within the building that are designed to be readable from the building exterior and will alarm should concentrations of explosive gases within the building exceed 25 percent of the LEL (1.25 percent methane by volume). The Respondents propose to install one sensor in the storage area in the north portion of the building, and one sensor in the shooting range area in the center portion of the building. The Respondents propose to install Sierra Monitoring Corporation (Sierra) Smart Infrared IR Combustible Gas Sensor Modules Model 5100-28-IT, or equivalent, for the explosive gas sensors. The explosive gas alarms will be checked and maintained at the frequency recommended by the manufacturer. The alarms and readouts will be positioned such that any alarm will be audible or visible to persons prior to their entry to the portion of the building where the alarm is located. The explosive gas alarm system meets the requirements of OAC 3745-27-12. As the building is located within the limits of waste, requirements of OAC 3745-27-12(E) with respect to additional monitoring of permanent monitors located between the waste and the building are not applicable. Respondents will notify USEPA, Ohio EPA, and the local health district of any exceedance of threshold limits, in accordance with the requirements of OAC 3745-27-12.

3.2 PROPOSED MITIGATION TECHNIQUES

Vapor intrusion mitigation can be implemented from a single remedy or combination of remedies. The proposed mitigation steps for the building are based on building controls and are discussed in further detail below. An iterative approach, up to and including sub-slab depressurization, if necessary, is proposed.

3.3 BUILDING CONTROLS

Building control remedies may reduce or eliminate the potential for vapor intrusion in buildings by preventing vapors present in the sub-slab from entering the indoor air of the building or increasing the flow rate of uncontaminated outdoor air into the building.

Potential applicable mitigation measures (as per USEPA Region 5 Guidance and Ohio EPA Guidance), include:

- Changing the pressurization of the building
- Increasing ventilation in the building
- Sealing cracks on concrete floors
- Sub-slab depressurization

The Respondents will recommend to the property owner and tenant that positive indoor pressurization be implemented, if suitable, based on building conditions and business operations. As detailed in the USEPA Region 5 Guidance, this method is used in commercial and industrial buildings where HVAC systems bring in outdoor ventilation air. Outdoor ventilation frequently is decreased to levels that would not provide adequate positive pressure to prevent VI.

In order to identify and seal all floor cracks and other vapor entry points through the slab, the Respondents will work with the building owner and tenant to have all contents removed, if possible. The Respondents will seal all cracks, if possible, in accordance with the following methods:

- All floor surfaces that are currently unsealed will be cleaned using a wet/dry vacuum prior to applying sealant. A wire brush may be used to loosen dirt or debris prior to vacuuming. Surfaces will be cleaned of all dirt, debris, oil and grease, and dried prior to sealing.
- Open cracks will be routed and sealed with hydraulic cement, or other VOC-free sealant.

Should the previously discussed mitigation measures not result in a reduction in indoor air contaminant concentrations to less than applicable criteria, the Respondents will design, install, maintain, and monitor a mitigation system. The mitigation system will consist of an active venting system designed to remove the vapors from the sub-slab environment before the vapors can enter the building. The mitigation system will reduce or eliminate the VI exposure pathway, thereby reducing or eliminating potential future exposures associated with this pathway.

Active venting is fairly easily implemented and is a technology that can readily be implemented in existing buildings. Active venting, such as sub-slab depressurization, uses a fan to continually draw air from the sub-slab and to exhaust the explosive gases to the atmosphere where they do not represent a threat.

The proposed scope of work for a sub-slab depressurization system (SSDS) will include:

i) Perform Communication Testing
ii) Design SSDS
iii) Install SSDS
iv) Perform Maintenance and Monitoring

3.3.1 TASK 1 – PERFORM COMMUNICATION TESTING

A design engineer will complete communication testing (also commonly called diagnostic testing) to evaluate the effectiveness of an SSDS prior to installation. This test will measure the radius of a suction field and assess the ability of air flow to extend through the sub-slab material. In the communication test, a centrally located hole is drilled through the concrete slab and suction is applied to this point using a high-flow/low-vacuum blower or fan capable of a sustainable flow rate of 100 to 1,000 liters per minute (L/min) against a vacuum of 5 to 50 inches of water column (developed using a high vacuum radon fan or Shop-Vac®-type vacuum). The design engineer will drill observations points (to supplement existing points) at various locations throughout the floor slab. Pressure changes in the sub-slab will be measured at the observation points, using a digital manometer or other similar device. Non-sparking equipment will be used to drill all locations required for communication testing. Combustible gas levels will be constantly monitored during all drilling activities.

A smoke test can also be performed at this time to confirm pressure measurements and to locate additional openings in the slab (cracks, joints, gaps, drain holes, etc.) that were not identified during the visual inspection and crack sealing discussed above. An inert, non-toxic, artificially created smoke unit will be used for leak detection, in order to avoid explosion hazards. Multiple suction points will be necessary for the testing of the SIM Trainer building, due to the size and complexity of the building. Following the tests, the test openings will be sealed to prevent VI, and to increase the effectiveness of the SSDS.

3.3.2 TASK 2 - DESIGN SUB-SLAB DEPRESSURIZATION SYSTEM

The information obtained from the Building Physical Survey, sub-slab probe installation, and communication testing will be used to prepare conceptual layout design drawings. The system design will include the number and location of suction points, pipe routing, discharge point(s), fan location(s), and fan sizing. The Respondents will consult with the property owner and tenant for input on their preferences for system component locations. The design drawings will be prepared to a level acceptable for use for contractor bidding purposes. The design will be based on industry standards and manufacturer information regarding equipment performance for an active depressurization system.

Following completion of design, a Mitigation System Design Report will be submitted for USEPA approval. This design report will contain the following information:

- Data from the vacuum-radius of influence testing, including sub-slab vacuum and flow measurements
- Figure(s) showing the number of proposed extraction locations and performance monitoring points
- Figure(s) showing the planned route for the discharge piping system(s) and the location of the exhaust fan(s) for each building
- Identification of materials and equipment to be used for each system (piping, blower sizing, vacuum monitoring, valving, etc.)
- Procedures for startup and performance testing following system installation
- Proposed operational goals and objectives including radius of influence and vacuum field monitoring point vacuums

A visual inspection will be completed to verify that no air intakes have been located near the proposed exhaust discharge point(s).

Following receipt of approvals from the property owner, tenant, and USEPA on the mitigation system design, contractor proposals will be solicited and contractor procurement undertaken.

3.3.3 TASK 3 – INSTALL THE SSDS

Any permitting requirements identified as part of the design phase and any required permits will be applied for and obtained prior to installation of startup of the SSDS consistent with state and local requirements.

Any electrical installation; roof, floor, and wall penetrations; epoxy coatings; and horizontal piping will be installed by licensed, bonded, and insured installers. The system installation will be completed by a State of Ohio Department of Health-licensed and insured Radon Mitigation Contractor/Specialist who will perform all work in compliance with local code requirements. The contractor will install the SSDS following methods outlined in ASTM E212-11, "Standard Practice for Installing Radon Mitigation Systems in Existing Low-Rise Residential Buildings".

The exact design details will not be known until Tasks 1 and 2 have been completed, but a general discussion of the anticipated VI mitigation system is described below.

The SSDS may consist of multiple vapor recovery points. Either multiple fans or larger blowers connected to multiple extraction points will be installed outside the building. The fans or blowers will pull a vacuum from the vapor recovery points. The vapors will discharge to the outdoor air above the building room. As methane is lighter than air, discharging the gases above the roof ensures that methane will not create a localized explosion hazard near the ground surface where potential ignition sources could ignite it. A sample port and an air-velocity monitoring access point will be installed in the discharge pipe at least two feet away from any constrictions (i.e., bends, elbows, etc.) and after (i.e., above) the fan. A common external fuse panel will be installed to power the SSDS system(s). The weatherproof panel will provide an uninterruptable power source, and be secured with a lock and tamper-proof box. Equipment used to install the SSDS will be intrinsically safe, because of the potential explosive situation.

Permanent vacuum monitoring points will be installed on each system, on the extraction side of the fan. A permanent vacuum gauge will consist of a "U-tube" manometer, or similar device, with a minimum vacuum of 1 inch of water. The permanent vacuum monitoring points will document that the sub-slab beneath the entire building has been depressurized. The Respondents will verify that manometer vacuum is in the range of 1 to 4 inches of water, and will mark the operating vacuum on the manometer.

An SSDS vacuum greater than 4 inches of water may result in suction of air from a contaminated plume and suction of VOCs towards the building.

Following the installation of the SSDS, the radius of influence will be checked using a digital manometer to determine if a vacuum is applied across the entire building slab. The digital manometer can be used at the sub-slab soil vapor probe locations, provided that they are located on opposite sides of the slab from the suction point. Additional sub-slab depressurization points and monitoring points can be installed if the resulting vacuum proves insufficient.

The following information will be recorded to define the operating performance of the SSDS:

- Location of the sub-slab sample points
- Initial sub-slab pressure field measurements
- Static pressure at each permanent vacuum monitoring point (U-tube manometer readings)
- Static pressure at the fan inlet

The Respondents will review the system components with the property owner and/or tenant following completion of system installation. If the property owner or tenant notices damage to the SSDS or the system is not functioning within the range marked on the permanent vacuum monitoring points, they will be able to call a CRA contact. Labels on the system components will list a telephone number for a CRA contact.

Any gaps around the extraction point penetration, utility penetrations, and other cracks in the foundation floor will be appropriately sealed.

3.3.4 TASK 4- PERFORM MAINTENANCE AND MONITORING

3.3.4.1 MAINTENANCE OF THE SSDS

An operation, maintenance, and monitoring (OM&M) plan will be completed within 1 month of system start-up. The OM&M plan will detail activities required to operate the SSDS, perform repairs, and a guideline to evaluate the effectiveness of system operations.

The SSDS maintenance program consists of an inspection and repair program for the system components. The Respondents will conduct a semi-annual inspection of the SSDS in the first year of operation, and annually thereafter, to ensure proper functionality. The inspection program will include visual inspections of the SSDS for deficiencies to verify that the system components are effectively performing their intended functions. The following forms will be included in the OM&M Plan:

- Inspection checklist
- Inspection Log
- Repair Log

3.3.4.2 MONITORING PROGRAM

A system start-up monitoring program will be conducted to document that the sub-slab beneath the entire area of concern has been depressurized. The system start-up monitoring program was detailed in Section 3.3.1 above, and consists of measuring digital manometer readings at suitable sub-slab soil vapor probe locations. Monitoring will also include measurement of vacuum in the permanent vacuum monitoring points, and discharge flows, as well as operation and maintenance checks of the system components. The Respondents will complete monitoring at least twice during the first 24 hours, weekly for the first month, and monthly for the first quarter following system start-up monitoring. Periodic monitoring will continue on an annual basis, for the duration of the mitigation system operation. Monitoring results will be documented on a form or in a field log book.

Post-installation proficiency sampling

To verify that the SSDS is operating to reduce indoor air concentrations of VI contaminants to less than applicable criteria, the Respondents will complete post-installation proficiency sampling consisting of the collection of indoor air samples from a location next to SS Probe A. Indoor air samples will be collected, analyzed, and evaluated in accordance with the USEPA-modified Vapor Intrusion Investigation Work Plan (November 2011). Respondents will collect indoor air samples approximately 30 days and 365 days after system installation to document that TCE concentrations in indoor air are decreasing, with the ultimate goal of reducing the concentrations to less than USEPA Industrial IASLs for Mitigation, corresponding to a target ELCR of 10^{-5} or HI of 1 in indoor air. Indoor air sampling will be completed at a frequency of every five years from the SSDS system installation, provided the SSDS is still operational. The Respondents will provide the results and corresponding evaluation after each sampling event to USEPA within 30 days of receiving the complete set of preliminary analytical data.

If the indoor air sampling results are not below applicable IASLs, the Respondents will evaluate the performance of the SSDS and complete any necessary system modifications within 60 days of receiving validated analytical results. Following completion of system modifications, a follow-up indoor air sampling event will be completed within 30 days.

Quality Assurance / Quality Control (QA/QC) samples will be collected at the frequency specified in the USEPA-modified Vapor Intrusion Investigation Work Plan.

Property owners and tenants will be provided with a letter summarizing analytical data.

As detailed above, the Respondents will install two continuous explosive gas monitors within the building to document explosive gas concentrations in the indoor air, dependent upon the consent of the owner.

Should indoor air or sub-slab explosive gas concentrations increase to levels that exceed the relevant thresholds, additional mitigation measures will be evaluated for the SIM Trainer building.

4.0 IMPLEMENTATION SCHEDULE

The following schedule is anticipated for this project:

	Estimated Completion Date
Task 1 – Pre-Design Communication Testing	4 weeks from approval
Task 2 – SSDS Design	8 weeks from approval
Task 3 – SSDS Installation	12 weeks from approval

The remedial alternatives for the Site as a whole, are discussed in the draft Streamlined Remedial Investigation and Feasibility Study Report for Operable Unit One (CRA, 2011) (OU1 RI/FS) and include the installation of a landfill cap over the entirety of OU1 with a passive landfill gas ventilation system. The OU1 RI/FS Report is currently under revision by USEPA. Section 2.4.2.2 of the draft OU1 RI/FS Report contains conceptual details for a passive LFG venting system. The details of the landfill gas mitigation system will be determined during the Remedial Design / Remedial Action (RD/RA) phase, based on a pre-design investigation. Any remedial alternative will include monitoring of the LFG mitigation system in accordance with the requirements of OAC 3745-27-12.

If you have any questions about the sampling results or the remedial activities underway at the Site, please contact me.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Adam Loney, B.Sc. Eng.

VC/cb/130
Encl.

cc: Ken Brown, ITW
Jim Campbell, Engineering Management, Inc.
Bryan Heath, NCR
Paul Jack, Castle Bay Inc.

LEGEND

- APPROXIMATE SITE BOUNDARY
- PARCEL BOUNDARY
- SUB SLAB SOIL VAPOUR BUILDING LOCATION
- MW-202 MONITORING WELL LOCATION
- VAS01 VAS SAMPLING LOCATION
- GP04-09 DEEP LANDFILL GAS PROBE
- SUB SLAB SOIL VAPOR SAMPLE LOCATION
- INDOOR AIR SAMPLE LOCATION

0 20 50ft

Parcel 5173- Bldg 1- IA_A	Mar 2012 ug/m3
Methane, field (%)	0.0
Trichloroethene	28 (d)

- SAMPLE ID (PARCEL - BUILDING)
- SAMPLE DATE
- SAMPLE UNITS
- CONCENTRATION VALUE
- COMPOUND
- EXCEEDANCE
- Max MAXIMUM DETECTED CONCENTRATION OF SELECTED COMPOUNDS IN UPPER AQUIFER ZONE SOIL GAS, SOIL, AND GROUNDWATER LOCATIONS SAMPLED FROM 2008 TO 2012.
- -- NOT MEASURED

SCREENING LEVELS (µg/m³)				
CHEMICAL NAME	1	2	3	4
1,1-Dichloroethane	77	--	770	--
Benzene	16	130	160	1300
Chlorobenzene	--	220	--	2200
Chloroform	5.3	430	53	4300
cis-1,2-Dichloroethene	--	260	--	2600
Ethylbenzene	49	4400	490	44000
m&p-Xylenes	--	440	--	4400
Methane	0.05	0.05	0.5	0.5
o-Xylene	--	440	--	4400
Tetrachloroethene	470	180	4700	1800
trans-1,2-Dichloroethene	--	260	--	2600
Trichloroethene	30	8.8	300	88
Vinyl Chloride	28	440	280	4400
Xylenes (total)	--	440	--	4400

SCREENING LEVELS:

1. USEPA INDUSTRIAL IASL FOR MITIGATION AND INDUSTRIAL SVSL FOR FURTHER INVESTIGATION TARGET ELCR (c,g)
2. USEPA INDUSTRIAL IASL FOR MITIGATION AND INDUSTRIAL SVSL FOR FURTHER INVESTIGATION TARGET HI (d,h)
3. USEPA INDUSTRIAL SVSL FOR MONITORING TARGET ELCR (i)
4. USEPA INDUSTRIAL SVSL FOR MONITORING TARGET HI (j)

NOTES:

METHANE CONCENTRATION SHOWN IN UNITS OF %.

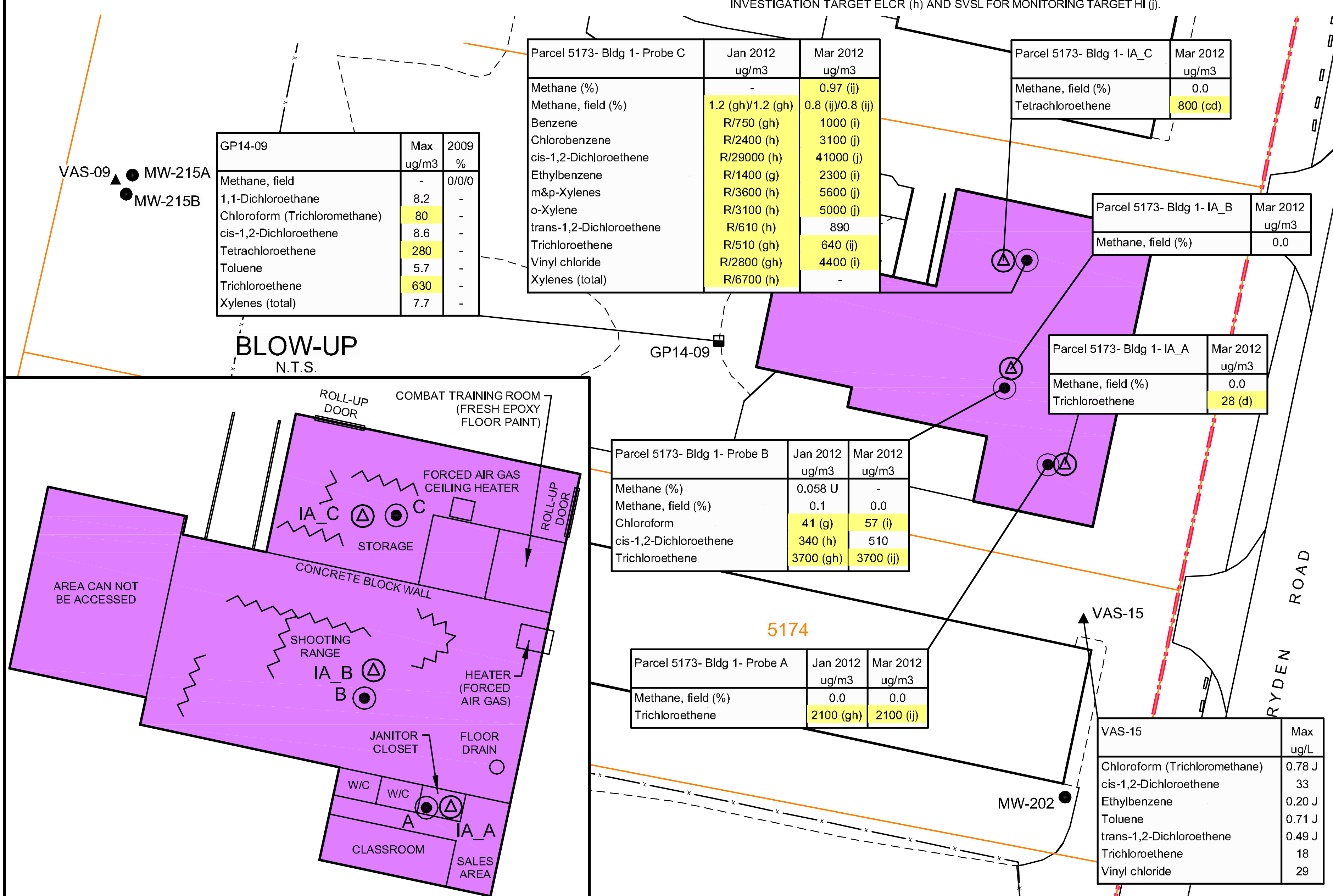
LEL - LOWER EXPLOSIVE LIMIT; UEL - UPPER EXPLOSIVE LIMIT

THE INDUSTRIAL SVSLs ARE BASED ON THE USEPA 2012 REGIONAL SCREENING LEVELS (MAY 2012) FOR INDUSTRIAL AIR.

THE SVSLs WERE DRIVED FROM THE USEPA (MAY 2012) RSLs BY APPLYING THE USEPA REGION 5 VAPOR INTRUSION GUIDEBOOK (OCT. 2010) DEFAULT SOIL-VAPOR-TO-INDOOR-AIR ATTENUATION FACTOR OF 0.1.

AN RSL IS NOT AVAILABLE FOR cis-1,2-DICHLOROETHENE; THE RSL FOR trans-1,2-DICHLOROETHENE WAS CONSIDERED AN EVALUATION SURROGATE FOR cis-1,2-DICHLOROETHENE.

SOIL GAS PROBE (GP) RESULTS ARE COMPARED TO USEPA INDUSTRIAL SVSL FOR FURTHER INVESTIGATION TARGET ELCR (h) AND SVSL FOR MONITORING TARGET HI (j).



GP14-09	Max ug/m3	2009 %
Methane, field	-	0/0/0
1,1-Dichloroethane	8.2	-
Chloroform (Trichloromethane)	80	-
cis-1,2-Dichloroethene	8.6	-
Tetrachloroethene	280	-
Toluene	5.7	-
Trichloroethene	630	-
Xylenes (total)	7.7	-

Parcel 5173- Bldg 1- Probe C	Jan 2012 ug/m3	Mar 2012 ug/m3
Methane (%)	-	0.97 (ij)
Methane, field (%)	1.2 (gh)/1.2 (gh)	0.8 (ij)/0.8 (ij)
Benzene	R/750 (gh)	1000 (i)
Chlorobenzene	R/2400 (h)	3100 (j)
cis-1,2-Dichloroethene	R/29000 (h)	41000 (j)
Ethylbenzene	R/1400 (g)	2300 (i)
m&p-Xylenes	R/3600 (h)	5600 (j)
o-Xylene	R/3100 (h)	5000 (j)
trans-1,2-Dichloroethene	R/610 (h)	890
Trichloroethene	R/510 (gh)	640 (ij)
Vinyl chloride	R/2800 (gh)	4400 (i)
Xylenes (total)	R/6700 (h)	-

Parcel 5173- Bldg 1- IA_C	Mar 2012 ug/m3
Methane, field (%)	0.0
Tetrachloroethene	800 (cd)

Parcel 5173- Bldg 1- IA_B	Mar 2012 ug/m3
Methane, field (%)	0.0

Parcel 5173- Bldg 1- IA_A	Mar 2012 ug/m3
Methane, field (%)	0.0
Trichloroethene	28 (d)

Parcel 5173- Bldg 1- Probe B	Jan 2012 ug/m3	Mar 2012 ug/m3
Methane (%)	0.058 U	-
Methane, field (%)	0.1	0.0
Chloroform	41 (g)	57 (i)
cis-1,2-Dichloroethene	340 (h)	510
Trichloroethene	3700 (gh)	3700 (ij)

Parcel 5173- Bldg 1- Probe A	Jan 2012 ug/m3	Mar 2012 ug/m3
Methane, field (%)	0.0	0.0
Trichloroethene	2100 (gh)	2100 (ij)

VAS-15	Max ug/L
Chloroform (Trichloromethane)	0.78 J
cis-1,2-Dichloroethene	33
Ethylbenzene	0.20 J
Toluene	0.71 J
trans-1,2-Dichloroethene	0.49 J
Trichloroethene	18
Vinyl chloride	29

PROFILE VIEW

N.T.S.

Building Characteristics:

Single-story commercial-use building constructed in three stages (north and center portions prior to 1956, western addition prior to 1959, southern addition prior to 1968). Total footprint is 8,250 sq. ft. Concrete block building with brick front. Slab-on-grade, bare concrete or painted concrete, fresh epoxy coat in north side combat training room, large cracks in the shooting range. Heavy staining and oil odor in storage area. Range heated by forced air natural gas ceiling units. Air handling unit pulls air from the range out the roof, operated during business hours. Forced air natural gas heat and central A/C in south section. Exterior openings - vents, fans, windows, 2 bay doors and two personnel doors. Occupied during business hours by one adult worker (4-hour shifts) and customers.

figure 1

PARCEL 5173 - SIM TRAINER BUILDING 1
2031 DRYDEN ROAD
SOUTH DAYTON DUMP AND LANDFILL SITE
Moraine, Ohio

SOURCES:
THE PAYNE FIRM, INC., PROJECT 0279.44.05, FIGURE 1, DATED 9/12/05;
TETRA TECH EM INC., PROJECT L0312006-SOUTH DAYTON DUMP, FIGURE 2, SITE LAYOUT, 05/25/2004;
CITY OF MORAINE.
ABRAMS AERIAL SURVEY INC. PROJECT 38443, AASI 29610, 04/02/2008

38443-62(CIBU130)GN-WA001 MAY 18/2012

TABLE 1

VAPOR INTRUSION SAMPLING VALUES
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*PID*	*O2 (%)*		CO_2	CH_4	*LEL (%)*	
Parcel / Building / Probe	*Date:*	*Time*	*(ppm)*	*Landtec*	*RKI*	*(%)*	*(%)*	*Landtec*	*RKI*
5173 / 1 / C / Storage area	1/12/2012	8:30	37.6	5.4	NM	3.3	1.2	NM	NM
5173 / 1 / Storage area ambient air	1/19/2012	11:50	0.9	22.1	NM	0.1	0	ND(1)[1]	NM
5173 / 1 / C / Storage area		12:01	391	7.5	NM	2.7	0.9	19	NM
5173 / 1 / Storage area ambient air	1/24/2012	10:00	0	21.5	NM	0	0	0	NM
5173 / 1 / C / Storage area		10:09	96.7	5.5	NM	2.8	0.9	19	NM
5173 / 1 / Storage area ambient air	1/31/2012	10:50	1.0	21.6	NM	0	0	0	NM
5173 / 1 / C / Storage area		11:14	182.7	5.5	NM	3.1	1.1	25	NM
5173 / 1 / Storage area ambient air	2/7/2012	10:44	0.1	21.7	NM	0.1	0	0	NM
5173 / 1 / C / Storage area		10:56	142.3	10.9	NM	1.8	0.9	21	NM
5173 / 1 / Storage area ambient air	2/16/2012	10:40	0.1	20.5	NM	0.1	0	0	NM
5173 / 1 / C / Storage area with filter		11:04	79.4	14.1	NM	3.1	0.5	10	NM
5173 / 1 / C / Storage area without filter		11:04	79.4	18.1	NM	0.3	0.2	3	NM
5173 / 1 / Storage area ambient air	3/1/2012	11:36	0.1	21.4	NM	0	0	0	NM
5173 / 1 / C / Storage area with filter		12:46	196.5	13.8	NM	0.2	0.3	7	NM
5173 / 1 / C / Storage area without filter		12:48	196.5	16.9	NM	1.5	0.4	9	NM
5173 / 1 / Storage area ambient air	3/13/2012	9:32	0	20.1	20.8	0.8	0	0	0
5173 / 1 / C / Storage area with filter		10:25	101.2	1.0	--	3.3	0.8	18	--
5173 / 1 / C / Storage area without filter		--	101.2	0.5	0.7	4.5	1.3	25	13
5173 / 1 / Storage area ambient air	3/22/2012	11:50	0	20.5	NM	0	0	0	NM
5173 / 1 / C / Storage area with filter		12:44	105.8	3.2	NM	1.2	0.7	11	NM
5173 / 1 / C / Storage area without filter		12:47	105.8	3	NM	5.1	1.1	24	NM
5173 / 1 / Storage area ambient air	3/27/2012	10:00	0.1	21.5	NM	0	0	0	NM
5173 / 1 / C / Storage area with filter		10:54	17.1	3.9	NM	1.9	0.9	17	NM
5173 / 1 / C / Storage area without filter		10:56	17.1	5.9	NM	5.4	1.2	26	NM
5173 / 1 / Storage area ambient air	4/3/2012	12:30	0	21	NM	0	0	0	NM
5173 / 1 / C / Storage area with filter		13:09	136.8	1.9	NM	0.4	0.8	19	NM
5173 / 1 / C / Storage area without filter		13:10	136.8	1.7	NM	5.1	1.4	29	NM
5173 / 1 / Storage area ambient air	4/10/2012	11:05	0	21.6	NM	0	0	0	NM
5173 / 1 / C / Storage area with filter		11:52	206.1	3	NM	0.5	0.8	19	NM
5173 / 1 / C / Storage area without filter		11:53	206.1	3.1	NM	1.2	0.9	27	NM
5173 / 1 / Storage area ambient air	4/17/2012	10:15	0	21.5	21.3	0	0	0	0
5173 / 1 / C / Storage area with filter		10:32	129.8	2.3	--	2.2	0.9	19	--
5173 / 1 / C / Storage area without filter		10:37	129.8	1.5	2.1	5.5	1.4	28	14
5173 / 1 / Storage area ambient air	4/26/2012	11:13	0	21..0	20.9	0	0	0	0
5173 / 1 / C / Storage area with filter		11:27	120.7	2.2	--	1.7	0.9	10	--
5173 / 1 / C / Storage area without filter		11:31	120.7	14.9	2.6	1.6	0.5	12	26
5173 / 1 / Storage area ambient air	5/3/2012	11:33	0	20.2	20.9	0.1	0	0	0
5173 / 1 / C / Storage area with filter		11:45	122.1	15.2	--	0.8	0.3	5	--
5173 / 1 / C / Storage area without filter		11:48	122.1	9.5	2.4	3.4	0.7	14	13
5173 / 1 / Storage area ambient air	5/10/2012	13:58	0	20.6	20.9	0	0	0	0
5173 / 1 / C / Storage area with filter		14:10	167.9	10.7	--	0.9	0.6	14	--
5173 / 1 / C / Storage area without filter		14:11	167.9	7.8	1.4	3.8	0.9	18	19

Notes:

1 - The explosive gas monitor baseline reading was 1 percent LEL. The meter did not zero for LEL readings and the corresponding methane readings were 0 percent; therefore, the readings of 1 percent are anomalous.

2 - Combustible Gas measurements from SIM Trainer were not collected during the week of February 20th, due to gun range closure.

PID - Photoionization Detector
O_2 - Oxygen
CO_2 - Carbon Dioxide
CH_4 - Methane
LEL - Lower Explosive Limit

TABLE 2

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1: JANUARY 2012
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1, Probe A*	*Parcel 5173, Bldg 1, Probe B*	*Parcel 5173, Bldg 1, Probe C*	*Parcel 5173, Bldg 1, Probe C*
Sample ID:			*SS-38443-011212-JC-074*	*SS-38443-011212-JC-071*	*SS-38443-011212-JC-072*	*SS-38443-011212-JC-073*
Sample Date:			*1/12/2012*	*1/12/2012*	*1/12/2012*	*1/12/2012*
Parameter	*USEPA Industrial SVSL for Further Investigation Corresponding to a Target ELCR of 10^{-6} in Indoor Air Assuming a DAF=0.1* g	*USEPA Industrial SVSL for Further Investigation Corresponding to a Target HI of 0.1 in Indoor Air Assuming a DAF=0.1* h				*Duplicate*
Volatile Organic Compounds						
1,1,1-Trichloroethane	-	22000	3.3 U	5.8 U	R	48 U
1,1,2,2-Tetrachloroethane	2.1	-	4.7 U	8.3 U	R	69 U
1,1,2-Trichloroethane	7.7	0.88	1.8 U	3.2 U	R	26 U
1,1-Dichloroethane	77	-	2.4 U	4.3 U	R	35 U
1,1-Dichloroethene	-	880	2.0 U	3.6 U	R	110 J
1,2,4-Trichlorobenzene	-	8.8	6.3 U	11 U	R	93 U
1,2,4-Trimethylbenzene	-	-	4.4 U	7.8 U	R	2900
1,2-Dibromoethane (Ethylene dibromide)	0.20	39	2.4 U	4.2 U	R	35 U
1,2-Dichlorobenzene	-	880	4.9 U	8.8 U	R	72 U
1,2-Dichloroethane	4.7	31	2.1 U	3.8 U	R	31 U
1,2-Dichloroethene (total)	-	-	11 J	510	R	30000
1,2-Dichloropropane	12	18	1.1 U	2.0 U	R	16 U
1,2-Dichlorotetrafluoroethane (CFC 114)	-	-	3.8 U	6.8 U	R	56 U
1,3,5-Trimethylbenzene	-	-	4.3 U	7.6 U	R	2300
1,3-Butadiene	-	-	0.38 U	0.67 U	R	5.5 U
1,3-Dichlorobenzene	11	3500	4.5 U	8.0 U	R	66 U
1,4-Dichlorobenzene	11	3500	4.5 U	8.0 U	R	66 U
1,4-Dioxane	-	-	5.4 U	9.6 U	R	79 U
2,2,4-Trimethylpentane	-	-	2.9 U	5.1 U	R	42 U
2-Butanone (Methyl ethyl ketone) (MEK)	-	22000	0.86 U	1.5 U	R	13 U
2-Chlorotoluene	-	-	4.2 U	7.4 U	R	61 U
2-Hexanone	-	130	2.7 U	4.9 U	R	40 U
2-Phenylbutane (sec-Butylbenzene)	-	-	4.4 U	7.8 U	R	620
4-Ethyl toluene	-	-	3.9 U	6.9 U	R	530
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	-	13000	1.8 U	3.2 U	R	27 U
Acetone	-	140000	3.5 J	3.2 U	R	170 J
Allyl chloride	-	-	1.0 U	1.8 U	R	15 U
Benzene	16	130	0.98 U	1.7 U	R	**750[gh]**
Benzyl chloride	-	-	4.1 UJ	7.2 UJ	R	60 UJ
Bromodichloromethane	3.3	-	3.2 U	5.7 U	R	47 U
Bromoform	110	-	3.4 U	6.0 UJ	R	49 U
Bromomethane (Methyl bromide)	-	22	0.80 U	1.4 U	R	12 U
Butane	-	-	5.2 J	0.79 U	R	15000
Carbon disulfide	-	3100	3.5 U	6.2 U	R	120 J
Carbon tetrachloride	20	440	3.5 U	6.3 U	R	52 U
Chlorobenzene	-	220	1.6 U	2.8 U	R	**2400[h]**
Chlorodifluoromethane	-	-	2.1 U	3.7 U	R	30 U
Chloroethane	-	44000	0.72 U	1.3 U	R	110 J
Chloroform (Trichloromethane)	5.3	430	2.6 U	**41[g]**	R	38 U
Chloromethane (Methyl chloride)	-	390	0.46 U	0.82 U	R	6.7 U
cis-1,2-Dichloroethene	-	260	11 J	**340[h]**	R	**29000[h]**
cis-1,3-Dichloropropene	31	88	1.2 U	2.2 U	R	18 U
Cyclohexane	-	26000	2.3 U	4.1 U	R	6600
Cymene (p-Isopropyltoluene)	-	-	4.5 U	8.0 U	R	340
Dibromochloromethane	4.5	-	3.1 U	5.4 U	R	45 U
Dichlorodifluoromethane (CFC-12)	-	440	3.2 U	5.7 U	R	47 U
Ethylbenzene	49	4400	1.6 U	2.9 U	R	**1400[g]**

TABLE 2

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1: JANUARY 2012
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1, Probe A*	*Parcel 5173, Bldg 1, Probe B*	*Parcel 5173, Bldg 1, Probe C*	*Parcel 5173, Bldg 1, Probe C*
Sample ID:			*SS-38443-011212-JC-074*	*SS-38443-011212-JC-071*	*SS-38443-011212-JC-072*	*SS-38443-011212-JC-073*
Sample Date:			*1/12/2012*	*1/12/2012*	*1/12/2012*	*1/12/2012*
Parameter	*USEPA Industrial SVSL for Further Investigation Corresponding to a Target ELCR of 10^{-6} in Indoor Air Assuming a DAF=0.1*	*USEPA Industrial SVSL for Further Investigation Corresponding to a Target HI of 0.1 in Indoor Air Assuming a DAF=0.1*				*Duplicate*
	g	*h*				
Hexachlorobutadiene	-	-	12 U	21 U	R	170 U
Hexane	-	-	1.8 J	2.8 U	R	4700
Isopropyl alcohol	-	-	1.6 U	2.8 U	R	23 U
Isopropyl benzene	-	1800	2.6 U	4.6 U	R	680
m&p-Xylenes	-	440	3.6 U	6.3 U	R	**3600 h**
Methyl methacrylate	-	-	0.91 U	1.6 U	R	13 U
Methyl tert butyl ether (MTBE)	470	13000	0.99 U	1.8 U	R	14 U
Methylene chloride	12000	2600	2.9 J	4.8 U	R	58 J
Naphthalene	3.6	13	7.7 U	14 U	R	110 U
N-Butylbenzene	-	-	5.2 U	9.2 U	R	150 J
N-Heptane	-	-	5.2 J	1.2 U	R	15000
N-Propylbenzene	-	-	4.2 U	7.5 U	R	610
o-Xylene	-	440	1.6 U	2.9 U	R	**3100 h**
Styrene	-	4400	2.2 U	3.9 U	R	32 U
tert-Butyl alcohol	-	-	3.7 U	6.5 U	R	54 U
tert-Butylbenzene	-	-	4.4 U	7.8 U	R	66 J
Tetrachloroethene	470	180	51	8.7 J	R	19 U
Tetrahydrofuran	-	-	0.91 U	1.6 U	R	13 U
Toluene	-	22000	5.3 J	2.1 U	R	13000
trans-1,2-Dichloroethene	-	260	2.2 U	170	R	**610 h**
trans-1,3-Dichloropropene	31	88	1.6 U	2.8 U	R	23 U
Trichloroethene	30	8.8	**2100 gh**	**3700 gh**	R	**510 gh**
Trichlorofluoromethane (CFC-11)	-	3100	3.3 U	5.8 U	R	48 U
Trifluorotrichloroethane (Freon 113)	-	130000	1.3 U	2.3 U	R	19 U
Vinyl bromide (Bromoethene)	-	-	1.4 U	2.5 U	R	21 U
Vinyl chloride	28	440	1.3 U	2.3 U	R	**2800 gh**
Xylenes (total)	-	440	1.6 U	2.9 U	R	**6700 h**
Gases						
Ethane (%)	-	-	-	-	-	-
Ethene (%)	-	-	-	-	-	-
Helium (%)	-	-	-	-	-	-
Methane (%)	0.5	0.5	-	0.058 U	-	-
Radiology						
Radon-222 (pCi/L)	-	-	-	-	-	-
Field Parameters						
Methane, field (%)	0.5	0.5	0.0	0.1	**1.2 gh**	-

Notes:

All concentrations are expressed in units of micrograms per cubic meter ($\mu g/m^3$) unless otherwise noted.
[1] - Landtec GEM 2000 measurement with/without charcoal carbon filter
J - Estimated.
R- Rejected
U - Non-detect at associated value.
UJ - Estimated reporting limit.
- - Not applicable.
pCi/L - picoCuries per liter
ppm - parts per million

TABLE 3

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1 FOLLOW-UP: MARCH 2012 SUB-SLAB SOIL VAPOR
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1, Probe A*	*Parcel 5173, Bldg 1, Probe B*	*Parcel 5173, Bldg 1, Probe C*	*Parcel 5173, Bldg 1, Probe C*
Sample ID:			*SS-38443-031312-JC-176*	*SS-38443-031312-JC-178*	*SS-38443-031312-JC-180*	*SS-38443-031312-JC-181*
Sample Date:			*3/13/2012*	*3/13/2012*	*3/13/2012*	*3/13/2012*
Parameter	*USEPA Industrial SVSL for Monitoring Corresponding to a Target ELCR of 10^{-5} in Indoor Air Assuming a DAF=0.1* *i*	*USEPA Industrial SVSL for Monitoring Corresponding to a Target HI of 1 in Indoor Air Assuming a DAF=0.1* *j*				
Volatile Organic Compounds						
1,1,1-Trichloroethane	-	220000	5.8 U	7.7 U	86 U	-
1,1,2,2-Tetrachloroethane	21	-	15 U	20 U	220 U	-
1,1,2-Trichloroethane	77	8.8	10 U	14 U	150 U	-
1,1-Dichloroethane	770	-	3.7 U	4.9 U	55 U	-
1,1-Dichloroethene	-	8800	4.5 U	6.0 U	140 J	-
1,2,4-Trichlorobenzene	-	88	26 U	34 U	380 U	-
1,2,4-Trimethylbenzene	-	-	11 U	15 U	4400	-
1,2-Dibromoethane (Ethylene dibromide)	2.0	390	12 U	16 U	180 U	-
1,2-Dichlorobenzene	-	8800	15 U	20 U	220 U	-
1,2-Dichloroethane	47	310	6.8 U	8.9 U	100 U	-
1,2-Dichloroethene (total)	-	-	-	-	-	-
1,2-Dichloropropane	120	180	8.6 U	11 U	130 U	-
1,2-Dichlorotetrafluoroethane (CFC 114)	-	-	8.0 U	11 U	120 U	-
1,3,5-Trimethylbenzene	-	-	11 U	15 U	2900	-
1,3-Butadiene	-	-	5.0 U	6.7 U	74 U	-
1,3-Dichlorobenzene	110	35000	14 U	18 U	200 U	-
1,4-Dichlorobenzene	110	35000	14 UJ	18 UJ	200 UJ	-
1,4-Dioxane	-	-	10 U	14 U	150 U	-
2,2,4-Trimethylpentane	-	-	6.5 U	37 J	700 J	-
2-Butanone (Methyl ethyl ketone) (MEK)	-	220000	21 U	28 U	310 U	-
2-Chlorotoluene	-	-	12 U	15 U	170 U	-
2-Hexanone	-	1300	8.5 U	11 U	120 U	-
2-Phenylbutane (sec-Butylbenzene)	-	-	13 U	17 U	980 J	-
4-Ethyl toluene	-	-	12 U	15 U	1000	-
4-Methyl-2-pentanone (Methyl isobutyl keton	-	130000	6.6 U	8.7 U	97 U	-
Acetone	-	1400000	120 U	160 U	1700 U	-
Allyl chloride	-	-	5.3 U	7.1 U	79 U	-
Benzene	160	1300	6.4 U	8.4 U	**1000**[i]	-
Benzyl chloride	-	-	14 U	19 U	210 U	-
Bromodichloromethane	33	-	10 U	14 U	150 U	-
Bromoform	1100	-	18 U	23 U	260 U	-
Bromomethane (Methyl bromide)	-	220	4.4 U	5.8 U	65 U	-
Butane	-	-	5.4 UJ	7.2 UJ	24000 J	-
Carbon disulfide	-	31000	3.4 U	4.5 U	220 J	-
Carbon tetrachloride	200	4400	8.5 U	11 U	130 U	-
Chlorobenzene	-	2200	8.0 U	11 U	**3100**[j]	-

TABLE 3

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1 FOLLOW-UP: MARCH 2012 SUB-SLAB SOIL VAPOR
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1, Probe A*	*Parcel 5173, Bldg 1, Probe B*	*Parcel 5173, Bldg 1, Probe C*	*Parcel 5173, Bldg 1, Probe C*
Sample ID:			*SS-38443-031312-JC-176*	*SS-38443-031312-JC-178*	*SS-38443-031312-JC-180*	*SS-38443-031312-JC-181*
Sample Date:			*3/13/2012*	*3/13/2012*	*3/13/2012*	*3/13/2012*
Parameter	*USEPA Industrial SVSL for Monitoring Corresponding to a Target ELCR of 10^{-5} in Indoor Air Assuming a DAF=0.1* *i*	*USEPA Industrial SVSL for Monitoring Corresponding to a Target HI of 1 in Indoor Air Assuming a DAF=0.1* *j*				
Chlorodifluoromethane	-	-	12 J	9.7 J	470 J	-
Chloroethane	-	440000	3.3 U	4.3 U	230 J	-
Chloroform (Trichloromethane)	53	4300	6.6 U	**57**[i]	97 U	-
Chloromethane (Methyl chloride)	-	3900	12 U	16 U	170 U	-
cis-1,2-Dichloroethene	-	2600	8.5 U	510	**41000**[j]	-
cis-1,3-Dichloropropene	310	880	12 U	16 U	180 U	-
Cyclohexane	-	260000	4.9 U	6.5 U	10000	-
Cymene (p-Isopropyltoluene)	-	-	11 U	15 U	450 J	-
Dibromochloromethane	45	-	13 U	17 U	190 U	-
Dichlorodifluoromethane (CFC-12)	-	4400	12 U	16 U	180 U	-
Ethylbenzene	490	44000	11 U	14 U	**2300**[i]	-
Hexachlorobutadiene	-	-	30 U	39 U	440 U	-
Hexane	-	-	4.0 U	6.6 J	6700	-
Isopropyl alcohol	-	-	9.5 J	11 J	92 J	-
Isopropyl benzene	-	18000	11 U	14 U	1100	-
m&p-Xylenes	-	4400	19 U	24 U	**5600**[j]	-
Methyl methacrylate	-	-	12 U	15 U	170 U	-
Methyl tert butyl ether (MTBE)	4700	130000	22 U	29 U	320 U	-
Methylene chloride	120000	26000	15 J	25 J	750 J	-
Naphthalene	36	130	17 U	22 U	250 U	-
N-Butylbenzene	-	-	9.0 U	12 U	590 J	-
N-Heptane	-	-	6.9 U	9.1 U	20000	-
N-Propylbenzene	-	-	9.8 U	13 U	960 J	-
o-Xylene	-	4400	9.4 U	12 U	**5000**[j]	-
Styrene	-	44000	8.8 U	12 U	130 U	-
tert-Butyl alcohol	-	-	4.1 U	5.4 U	290 J	-
tert-Butylbenzene	-	-	13 U	17 U	190 U	-
Tetrachloroethene	4700	1800	48	17 J	140 U	-
Tetrahydrofuran	-	-	6.6 U	8.7 U	97 U	-
Toluene	-	220000	7.2 U	10 J	20000	-
trans-1,2-Dichloroethene	-	2600	7.1 U	230	890	-
trans-1,3-Dichloropropene	310	880	7.8 U	10 U	110 U	-
Trichloroethene	300	88	**2100**[ij]	**3700**[ij]	**640**[ij]	-
Trichlorofluoromethane (CFC-11)	-	31000	4.8 U	6.3 U	71 U	-
Trifluorotrichloroethane (Freon 113)	-	1300000	8.5 U	11 U	120 U	-
Vinyl bromide (Bromoethene)	-	-	5.5 U	7.2 U	80 U	-
Vinyl chloride	280	4400	6.5 U	8.5 U	**4400**[i]	-

TABLE 3

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1 FOLLOW-UP: MARCH 2012 SUB-SLAB SOIL VAPOR
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1, Probe A*	*Parcel 5173, Bldg 1, Probe B*	*Parcel 5173, Bldg 1, Probe C*	*Parcel 5173, Bldg 1, Probe C*
Sample ID:			*SS-38443-031312-JC-176*	*SS-38443-031312-JC-178*	*SS-38443-031312-JC-180*	*SS-38443-031312-JC-181*
Sample Date:			*3/13/2012*	*3/13/2012*	*3/13/2012*	*3/13/2012*
Parameter	*USEPA Industrial SVSL for Monitoring Corresponding to a Target ELCR of 10^{-5} in Indoor Air Assuming a DAF=0.1*	*USEPA Industrial SVSL for Monitoring Corresponding to a Target HI of 1 in Indoor Air Assuming a DAF=0.1*				
	i	*j*				
Xylenes (total)	-	4400	-	-	-	-
Gases						
Ethane (%)	-	-	-	-	-	0.21 U
Ethene (%)	-	-	-	-	-	0.21 U
Helium (%)	-	-	-	-	-	-
Methane (%)	0.5	0.5	-	-	-	**0.97**[ij]
Radiology						
Radon-222 (pCi/L)	-	-	-	-	-	-
Field Parameters						
Methane, field (%)	0.5	0.5	0.0	0.0	0.8	0.8

Notes:

All concentrations are expressed in units of micrograms per cubic meter ($\mu g/m^3$) unless otherwise noted.
[1] - Landtec GEM 2000 measurement with/without charcoal carbon filter
J - Estimated.
R- Rejected
U - Non-detect at associated value.
UJ - Estimated reporting limit.
- - Not applicable.
pCi/L - picoCuries per liter
ppm - parts per million

TABLE 4

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1 FOLLOW-UP: MARCH 2012 INDOOR AIR
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1*	*Parcel 5173, Bldg 1, IA_A*	*Parcel 5173, Bldg 1, IA_B*	*Parcel 5173, Bldg 1, IA_C*
Sample ID:			*OA-38443-031312-JC-174*	*IA-38443-031312-JC-175*	*IA-38443-031312-JC-177*	*IA-38443-031312-JC-179*
Sample Date:			*3/13/2012*	*3/13/2012*	*3/13/2012*	*3/13/2012*
	USEPA Industrial IASL for Mitigation	*USEPA Industrial IASL for Mitigation*				
Parameter	*Corresponding to a Target ELCR of 10^{-5} in Indoor Air*	*Corresponding to a Target HI of 1 in Indoor Air*				
	c	*d*				
Volatile Organic Compounds						
1,1,1-Trichloroethane	-	22000	0.16 U	0.16 U	0.16 U	0.65 U
1,1,2,2-Tetrachloroethane	2.1	-	0.42 U	0.42 U	0.42 U	1.7 U
1,1,2-Trichloroethane	7.7	0.88	0.29 U	0.29 U	0.29 U	1.2 U
1,1-Dichloroethane	77	-	0.11 U	0.11 U	0.11 U	0.42 U
1,1-Dichloroethene	-	880	0.13 U	0.13 U	0.13 U	0.51 U
1,2,4-Trichlorobenzene	-	8.8	0.73 U	0.73 U	0.73 U	2.9 U
1,2,4-Trimethylbenzene	-	-	0.31 U	2.2	1.7	3.6 J
1,2-Dibromoethane (Ethylene dibromide)	0.2	39	0.34 U	0.34 U	0.34 U	1.4 U
1,2-Dichlorobenzene	-	880	0.42 U	0.42 U	0.42 U	1.7 U
1,2-Dichloroethane	4.7	31	0.19 U	0.19 U	0.19 U	0.76 U
1,2-Dichloroethene (total)	-	-	-	-	-	-
1,2-Dichloropropane	12	18	0.24 U	0.24 U	0.24 U	0.96 U
1,2-Dichlorotetrafluoroethane (CFC 114)	-	-	0.22 U	0.22 U	0.22 U	0.89 U
1,3,5-Trimethylbenzene	-	-	0.32 U	0.57 J	0.43 J	1.3 U
1,3-Butadiene	-	-	0.14 U	0.14 U	0.69 J	0.57 U
1,3-Dichlorobenzene	11	3500	0.39 U	0.39 U	0.39 U	1.6 U
1,4-Dichlorobenzene	11	3500	0.38 U	0.38 UJ	0.38 UJ	1.5 UJ
1,4-Dioxane	-	-	0.29 U	0.29 U	0.29 U	1.2 U
2,2,4-Trimethylpentane	-	-	0.18 U	0.26 J	0.18 U	4.0 J
2-Butanone (Methyl ethyl ketone) (MEK)	-	22000	1.1 J	2.5 J	1.7 J	6.8 J
2-Chlorotoluene	-	-	0.33 U	0.33 U	0.33 U	1.3 U
2-Hexanone	-	130	0.24 U	0.24 U	0.24 U	0.95 U
2-Phenylbutane (sec-Butylbenzene)	-	-	0.35 U	0.35 U	0.35 U	1.4 U
4-Ethyl toluene	-	-	0.32 U	1.6 J	0.66 J	2.3 J
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	-	13000	0.18 U	15	45	25
Acetone	-	140000	5.1 J	55	15	24 J
Allyl chloride	-	-	0.15 U	0.15 U	0.15 U	0.60 U
Benzene	16	130	0.22 J	1.5	1.6	1.6 J
Benzyl chloride	-	-	0.40 U	0.40 U	0.40 U	1.6 U
Bromodichloromethane	3.3	-	0.29 U	0.29 U	0.29 U	1.2 U
Bromoform	110	-	0.50 U	0.50 U	0.50 U	2.0 U
Bromomethane (Methyl bromide)	-	22	0.12 U	0.12 U	0.12 U	0.50 U
Butane	-	-	1.8	6.5 J	2.8 J	21 J
Carbon disulfide	-	3100	0.097 U	0.27 J	0.30 J	0.39 U
Carbon tetrachloride	20	440	0.45 J	0.60 J	0.51 J	0.96 U
Chlorobenzene	-	220	0.23 U	0.23 U	0.23 U	0.90 U

TABLE 4

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1 FOLLOW-UP: MARCH 2012 INDOOR AIR
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1*	*Parcel 5173, Bldg 1, IA_A*	*Parcel 5173, Bldg 1, IA_B*	*Parcel 5173, Bldg 1, IA_C*
Sample ID:			*OA-38443-031312-JC-174*	*IA-38443-031312-JC-175*	*IA-38443-031312-JC-177*	*IA-38443-031312-JC-179*
Sample Date:			*3/13/2012*	*3/13/2012*	*3/13/2012*	*3/13/2012*
Parameter	*USEPA Industrial IASL for Mitigation Corresponding to a Target ELCR of 10^{-5} in Indoor Air*	*USEPA Industrial IASL for Mitigation Corresponding to a Target HI of 1 in Indoor Air*				
	c	*d*				
Chlorodifluoromethane	-	-	1.7	3.3 J	3.4 J	5.4 J
Chloroethane	-	44000	0.092 U	0.092 U	0.092 U	0.37 U
Chloroform (Trichloromethane)	5.3	430	0.19 U	0.38 J	0.19 U	0.74 U
Chloromethane (Methyl chloride)	-	390	1.2	2.2	1.7	1.3 U
cis-1,2-Dichloroethene	-	260	0.24 U	0.24 U	0.24 U	0.95 U
cis-1,3-Dichloropropene	31	88	0.34 U	0.34 U	0.34 U	1.3 U
Cyclohexane	-	26000	0.14 U	1.1 J	0.44 J	14
Cymene (p-Isopropyltoluene)	-	-	0.31 U	0.31 U	0.31 U	1.3 U
Dibromochloromethane	4.5	-	0.36 U	0.36 U	0.36 U	1.4 U
Dichlorodifluoromethane (CFC-12)	-	440	2.0	2.8	2.7	3.5 J
Ethylbenzene	49	4400	0.30 U	0.66 J	0.50 J	1.9 J
Hexachlorobutadiene	-	-	0.83 U	0.83 U	0.83 U	3.3 U
Hexane	-	-	0.34 J	8.7	2.2	89
Isopropyl alcohol	-	-	0.36 J	58	3.1 J	15 J
Isopropyl benzene	-	1800	0.29 U	0.29 U	0.29 U	1.2 U
m&p-Xylenes	-	440	0.52 U	2.2	1.9	6.9
Methyl methacrylate	-	-	0.32 U	0.32 U	0.32 U	1.3 U
Methyl tert butyl ether (MTBE)	470	13000	0.61 U	0.61 U	0.61 U	2.5 U
Methylene chloride	12000	2600	0.59 J	1.1 J	1.00 J	4.7 J
Naphthalene	3.6	13	0.47 U	1.3 J	0.47 U	1.9 U
N-Butylbenzene	-	-	0.25 U	0.37 J	0.25 U	1.0 U
N-Heptane	-	-	0.19 U	0.93 J	0.40 J	5.6 J
N-Propylbenzene	-	-	0.28 U	0.28 U	0.28 U	1.1 U
o-Xylene	-	440	0.26 U	0.92	0.72 J	2.7 J
Styrene	-	4400	0.25 U	0.49 J	0.35 J	0.99 U
tert-Butyl alcohol	-	-	0.14 J	0.84 J	0.38 J	0.46 U
tert-Butylbenzene	-	-	0.36 U	0.36 U	0.36 U	1.4 U
Tetrachloroethene	470	180	0.27 U	5.7	9.7	**800**[cd]
Tetrahydrofuran	-	-	0.19 U	0.19 U	0.19 U	0.74 U
Toluene	-	22000	0.61 J	14	4.8	57
trans-1,2-Dichloroethene	-	260	0.20 U	0.20 U	0.20 U	0.79 U
trans-1,3-Dichloropropene	31	88	0.22 U	0.22 U	0.22 U	0.87 U
Trichloroethene	30	8.8	0.19 U	**28**[d]	0.67 J	8.8
Trichlorofluoromethane (CFC-11)	-	3100	1.1	2.0	1.4	1.7 J
Trifluorotrichloroethane (Freon 113)	-	130000	0.46 J	0.69 J	0.60 J	0.95 U
Vinyl bromide (Bromoethene)	-	-	0.15 U	0.15 U	0.15 U	0.61 U
Vinyl chloride	28	440	0.18 U	0.18 U	0.18 U	0.73 U

TABLE 4

SUMMARY OF VAPOR INTRUSION ANALYTICAL RESULTS
ROUND 1 FOLLOW-UP: MARCH 2012 INDOOR AIR
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Sample Location:			*Parcel 5173, Bldg 1*	*Parcel 5173, Bldg 1, IA_A*	*Parcel 5173, Bldg 1, IA_B*	*Parcel 5173, Bldg 1, IA_C*
Sample ID:			*OA-38443-031312-JC-174*	*IA-38443-031312-JC-175*	*IA-38443-031312-JC-177*	*IA-38443-031312-JC-179*
Sample Date:			*3/13/2012*	*3/13/2012*	*3/13/2012*	*3/13/2012*
	USEPA Industrial IASL for Mitigation	*USEPA Industrial IASL for Mitigation*				
Parameter	*Corresponding to a Target ELCR of 10^{-5} in Indoor Air*	*Corresponding to a Target HI of 1 in Indoor Air*				
	c	*d*				
Xylenes (total)	-	440	-	-	-	-
Gases						
Ethane (%)	-	-	-	-	-	-
Ethene (%)	-	-	-	-	-	-
Helium (%)	-	-	-	-	-	-
Methane (%)	0.05	0.05	-	-	-	-
Radiology						
Radon-222 (pCi/L)	-	-	-	-	-	-
Field Parameters						
Methane, field (%)	0.05	0.05	0.0	0.0	0.0	0.0

Notes:

All concentrations are expressed in units of micrograms per cubic meter ($\mu g/m^3$) unless otherwise noted.

[1] - Landtec GEM 2000 measurement with/without charcoal carbon filter

J - Estimated.

R- Rejected

U - Non-detect at associated value.

UJ - Estimated reporting limit.

- - Not applicable.

pCi/L - picoCuries per liter

ppm - parts per million

TABLE 5

SUMMARY OF METHANE VALUES
PARCEL 5173 BUILDING 1 - SIM TRAINER
SOUTH DAYTON DUMP AND LANDFILL SITE
MORAINE, OHIO

Soil Gas Sample Location	*Sample Date*	*Maximum Methane Value*	*Corresponding Parcel 5173 Building 1 SS probe location*	*Sample Date*	*Maximum Methane Value*	*Explosive Limits*		
						UEL	*LEL*	*10% LEL*
GP14-09	2009	0	Probe A (southern portion)	01/12/11	0.0	15	5	0.5
			Probe B (shooting range)	01/10/12	0.1			
			Probe C (northern storage portion)	01/10/12	1.2			